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ZLAIMS

1. A watermark insertion apparatus comprising:

a watermark insertion section that inserts in a program watermark that differs for each program distribution destination; and

a code insertion section that inserts in said program watermark verification code that prevents said program from operating correctly when said watermark is tampered with:

wherein said watermark verification code is made identical regardless of said distribution destination.

- The watermark insertion apparatus according to
 claim 1, wherein said watermark is generated from ID information that uniquely determines a program distribution destination.
- 3. The watermark insertion apparatus according to 20 claim 1, further comprising a function insertion section that defines a function that outputs a predetermined constant from said watermark and inserts an expression that assigns said function to a variable in said program; wherein
- said watermark verification code is a conditional branch that determines whether said variable and said constant are equal, and when said variable and said constant are not equal halts said program; and

said watermark verification code is made identical regardless of said distribution destination.

- 4. The watermark insertion apparatus according to claim 1, wherein said watermark verification code is necessary for said program to be made to operate correctly.
- 5. The watermark insertion apparatus according to claim 4, wherein said watermark verification code has inserted a calculation expression that does not affect a decision statement of a decision branch generated from said watermark in said decision branch extracted from said program.
- 15 6. A watermark extraction apparatus comprising:
 - a program input section that inputs a program in which the watermark insertion apparatus according to claim 1 has inserted said watermark and said watermark verification code; and
- a watermark detection section that extracts said watermark from said program and generates ID information that uniquely identifies said distribution destination based on said watermark;

wherein a distribution destination is identified 25 based on generated said ID information.

7. A program illegal distribution prevention system comprising:

inserting a in a program watermark that differs for each program distribution destination; and

converting a part other than a location at which said watermark is inserted while maintaining specifications of said program.

11. A watermark insertion program that causes a computer to:

insert watermark that differs for each program

10 distribution destination in said program and use said

watermark;

prevent said program for distribution from operating correctly when said watermark is tampered with; and

- insert watermark verification code that is identical regardless of said distribution destination in said program for distribution.
 - 12. A watermark insertion apparatus comprising:
- a watermark insertion section that inserts in a program watermark that differs for each program distribution destination; and

a conversion section that converts a part other than a location at which said watermark is inserted while

25 maintaining specifications of said program.

13. The watermark insertion apparatus according to claim 12, wherein said conversion section inserts an

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execution code pair that does not affect specifications in a part other than a location at which said watermark is inserted.

- 5 14. The watermark insertion apparatus according to claim 12, wherein identification information is stored that indicates an insertion location of said watermark.
- 15. The watermark insertion apparatus according to

 10 claim 14, wherein said identification information is a

 method name or line number.
 - 16. The watermark insertion apparatus according to claim 12, wherein said conversion section performs obfuscating so that specifications are not affected in a part other than a location at which said watermark is inserted.
 - 17. A watermark extraction apparatus comprising:
- a program input section that inputs a program in which the watermark insertion apparatus according to claim 12 has inserted said watermark; and
 - a watermark detection section that extracts said watermark from said program;
- wherein a distribution destination is identified based on extracted said watermark.
 - 18. A watermark extraction apparatus comprising:

a program input section that inputs a program in which the watermark insertion apparatus according to claim 15 has inserted said watermark; and

a watermark detection section that obtains said

identification information, identifies a watermark
insertion location from said identification information,
and extracts said watermark from only identified said
watermark insertion location;

wherein a distribution destination is identified

10 based on extracted said watermark.

19. A program that causes a computer to:

insert in a program watermark that differs for each program distribution destination; and

- convert a part other than a location at which said watermark is inserted without changing specifications of said program.
- 20. The watermark insertion apparatus according to claim 12, wherein said conversion section converts a sequence of a part that is a part other than a location at which said watermark is inserted and is a part that does not affect specifications even if said sequence is switched around.

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21. The watermark insertion apparatus according to claim 20, wherein historical information on a part that does not affect said specifications is held, and using

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said historical information, conversion of a part that does not affect said specifications is made to differ for each distribution destination.